UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,116	09/27/2000	Jivendra K. Kale	19748-1.10US	7098

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EXAMINER
SHIH, SALLY

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This application has been reviewed. Original claims 1-31 are pending. The objections

and rejections are as stated below:

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Rebane (United

States Patent Number 6,405,179 B1).

Claim1.   Rebane discloses a computer-implemented method of constructing a portfolio

having a utility defined by at least a first function and a second function, the computer-

implemented method comprising:

selecting a plurality of assets in the portfolio (abstract; fig. 6 and associated text); and

maximizing an expected utility of the portfolio (fig. 6 and associated text); wherein the at

least first function is a power-utility function having a first power defining the degree of risk

aversion of a holder of the portfolio and wherein the at least second function is a power-utility

function having a second power defining the degree of risk aversion of the holder of the

portfolio, wherein the first power is different from the second power (figs. 7-12 and associated text).

Claim 2.   Rebane discloses the method of Claim 1 wherein the at least first power-utility function defines the utility of the portfolio for positive rates of returns and wherein the at least second power-utility function defines the utility of the portfolio for negative rates of returns (figs. 7-12 and associated text).

Claim 3.   Rebane discloses the method of Claim 1 wherein the at least first power-utility function is a log-utility function (figs. 9, 12 and associated text).

Claim 4.   Rebane discloses the method of Claim 2 wherein the at least first power-utility function is a log-utility function (figs. 9, 12 and associated text).

Claim 5.   Rebane discloses the method of Claim 4 wherein the act of maximizing the expected utility of the portfolio further comprises the act of selecting a weight for each asset in the portfolio (fig. 8 and associated text).

Claim 6.   Rebane discloses the method of Claim 5 wherein the act of selecting a weight for each asset in the portfolio further comprises:

assigning a probability point to the occurrence of each one of a plurality of economic events (abstract; fig. 3 and associated text);

computing the utility of the portfolio for each economic event (abstract; fig. 3 and associated text);

multiplying the utility of portfolio computed for each economic event with the probability of the occurrence of that economic event thereby generating a plurality of values (abstract; fig. 3 and associated text); and

summing the values (abstract; fig. 3 and associated text).

Claim 7.   Rebane discloses the method of Claim 6 wherein the act of assigning a probability

point to the occurrence of each one of the plurality of economic events comprises assigning a

probability point to the occurrence of each one of the plurality of economic events based on past

economic data (abstract; fig. 3 and associated text).

Claim 8.   Rebane discloses a computer system for constructing a portfolio having a utility

defined by at least a first function and a second function, the computer system comprising:

a processor (fig. 4 and associated text); and

a memory coupled to the processor (figs. 4-5 and associated text), said memory storing a

plurality of code modules for execution by the processor, the plurality of code modules

comprising:

a code module for selecting a plurality of assets in the portfolio (abstract; fig. 6 and

associated text); and

a code module for maximizing an expected utility of the portfolio (fig. 6 and associated

text); wherein the at least first function is a power-utility function having a first power defining

the degree of risk aversion of a holder of the portfolio and wherein the at least second function is

a power-utility function having a second power defining the degree of risk aversion of the holder

of the portfolio, wherein the first power is different from the second power (figs. 7-12 and

associated text).

Claim 9.   Rebane discloses the computer system of Claim 8, wherein the code module for

maximizing the expected utility of the portfolio comprises code for the at least first function

defining positive rates of returns and wherein the code module for maximizing the expected

utility of the portfolio comprises code for the at least second function defining negative rates of

returns (figs. 7-12 and associated text).

Claim 10.   Rebane discloses the computer system of Claim 8, wherein the code module for

maximizing the expected utility of the portfolio comprises code for the at least first function that

is a log-utility function (figs. 9, 12 and associated text).

Claim 11.   Rebane discloses the computer system of Claim 9, wherein the code module for

maximizing the expected utility of the portfolio comprises code for the at least first function that

is a log-utility function (figs. 9, 12 and associated text).

Claim 12.   Rebane discloses the computer system of Claim 11 wherein the code module for

maximizing the expected utility of the portfolio further comprises a code module for selecting a

weight for each one of the plurality of assets in the portfolio (fig. 8 and associated text).

Claim 13.   Rebane discloses the computer system of Claim 12, wherein the code module for

selecting a weight for each one of the plurality of assets in the portfolio further comprises:

        code module for assigning a probability point to the occurrence of each one of a plurality

of economic events (abstract; fig. 3 and associated text);

        code module for computing the utility of the portfolio for each one of the plurality of

economic events (abstract; fig. 3 and associated text); and

        code module for multiplying the utility of the portfolio computed for each one of the

plurality of economic events with the probability of the occurrence of that economic event

thereby generating a plurality of values (abstract; fig. 3 and associated text); and code module for

summing the values (abstract; fig. 3 and associated text).

Claim 14.   Rebane discloses a computer program for constructing a portfolio having a utility defined by at least a first function and a second function, the computer program being executable by a processor and comprising:

a code module for selecting a plurality of assets in the portfolio (abstract; fig. 6 and associated text); and

a code module for maximizing an expected utility of the portfolio (fig. 6 and associated text); wherein the at least first function is a power-utility function having a first power defining the degree of risk aversion of a holder of the portfolio and wherein the at least second function is a power-utility function having a second power defining the degree of risk aversion of the holder of the portfolio, wherein the first power is different from the second power (figs. 7-12 and associated text).

Claim 15.   Rebane discloses the computer program of Claim 14, wherein the code module for maximizing the expected utility of the portfolio comprises code for the at least first function defining positive rates of returns and wherein the code module for maximizing the expected

utility of the portfolio comprises code for the at least second function defining negative rates of returns (figs. 7-12 and associated text).

Claim 16.   Rebane discloses the computer program of Claim 14, wherein the code module for maximizing the expected utility of the portfolio comprises code for the at least first function that is a log-utility function (figs. 9, 12 and associated text).

Claim 17.   Rebane discloses the computer program of Claim 15, wherein the code module for maximizing the expected utility of the portfolio comprises code for the at least first function that is a log-utility function (figs. 9, 12 and associated text).

Claim 18.   Rebane discloses the computer system of Claim 17 wherein the code module for

maximizing the expected utility of the portfolio further comprises a code module for selecting

a weight for each one of the plurality of assets in the portfolio (fig. 8 and associated text).

Claim 19.   Rebane discloses the computer system of Claim 18, wherein the code module for

selecting a weight for each one of the plurality of assets in the portfolio further comprises:

       code module for assigning a probability point to the occurrence of each one of a plurality

of economic events (abstract; fig. 3 and associated text);

       code module for computing the utility of the portfolio for each one of a plurality of

economic events (abstract; fig. 3 and associated text); and

       code module for multiplying the utility of the portfolio computed for each one of the

plurality of economic events with the probability of the occurrence of that economic event

thereby generating a plurality of values (abstract; fig. 3 and associated text); and code module for

summing the values (abstract; fig. 3 and associated text).

Claim 20.   Rebane discloses a networked system for constructing a portfolio having a utility

defined by at least a first function and a second function, the networked system comprising:

       a communication network (figs. 4-5 and associated text);

       a computer system coupled to the communication network (figs. 4-5 and associated text);

       a database coupled to the communication network; wherein the computer system is

configured to: select a plurality of assets in the portfolio (abstract; fig. 6 and associated text); and

maximize an expected utility of the portfolio; wherein the at least first function is a power-utility

function having a first power defining the degree of risk aversion of a holder of the portfolio and

wherein the at least second function is a power-utility function having a second power defining

the degree of risk aversion of the holder of the portfolio, wherein the first power is different from

the second power (figs. 7-12 and associated text).

Claim 21.   Rebane discloses the networked system of Claim 20, wherein the at least first

function defines positive rates of returns of the portfolio and wherein the at least second function

defines negative rates of returns of the portfolio (figs. 7-12 and associated text).

Claim 22.   Rebane discloses the networked system of Claim 20, wherein the at least first

function is a log-utility function (figs. 9, 12 and associated text).

Claim 23.   Rebane discloses the networked system of Claim 21, wherein the at least first

function is a log-utility function (figs. 9, 12 and associated text).

Claim 24.   Rebane discloses the networked system of Claim 23, wherein the networked

system is further configured to select a weight for each asset in the portfolio (fig. 8 and

associated text).

Claim 25.   Rebane discloses the networked system of Claim 23, wherein the computer

system is further configured to:

        assign a probability point to the occurrence of each one of a plurality of 4   economic

events (abstract; fig. 3 and associated text);

        compute the utility of the portfolio for each one of the plurality of economic events

(abstract; fig. 3 and associated text);

        multiply the utility of portfolio computed for each economic event with the probability of

the occurrence of that economic event thereby generating a plurality of values (abstract; fig. 3

and associated text); and sum the values (abstract; fig. 3 and associated text).

Claim 26.   Rebane discloses a computer program stored on a computer-readable medium for

constructing a portfolio having a utility defined by at least a first function and a second function,

the computer program comprising:

        code for selecting a plurality of assets in the portfolio (abstract; fig. 6 and associated

text); and

        code for maximizing an expected utility of the portfolio (fig. 6 and associated text);

wherein the at least first function is a power-utility function having a first power defining the

degree of risk aversion of a holder of the portfolio and wherein the at least second function is a

power utility function having a second power defining the degree of risk aversion of the holder

of the portfolio, wherein the first power is different from the second power (figs. 7-12 and

associated text).

Claim 27.   Rebane discloses the computer program of Claim 26, wherein the code for

maximizing the expected utility of the portfolio comprises code for the at least first function

defining positive rates of returns and wherein the code for maximizing the expected utility of the

portfolio comprises code for the at least second function defining negative rates of returns (figs.

7-12 and associated text).

Claim 28.   Rebane discloses the computer system of Claim 26, wherein the code for

maximizing the expected utility of the portfolio comprises code for the at least first function that

is a log utility function (figs. 9, 12 and associated text).

Claim 29.   Rebane discloses the computer system of Claim 27, wherein the code for

maximizing the expected utility of the portfolio comprises code for the at least first function that

is a log utility function (figs. 9, 12 and associated text).

Claim 30.   Rebane discloses the computer program of Claim 29 wherein the code for

maximizing the expected utility of the portfolio further comprises code for selecting a weight for

each asset in the portfolio (fig. 8 and associated text).

Claim 31.   Rebane discloses the computer program of Claim 30, wherein the code for

selecting a weight for each asset in the portfolio further comprises:

    code for assigning a probability point to the occurrence of each one of a plurality of

economic events (abstract; fig. 3 and associated text);

    code for computing the utility of the portfolio for each one of the plurality of economic

events (abstract; fig. 3 and associated text);

    code for multiplying the utility of portfolio computed for each economic event with the

probability of the occurrence of that economic event thereby generating a plurality of values

(abstract; fig. 3 and associated text); and

    code for summing the values (abstract; fig. 3 and associated text).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. USPN 5,812,987, USPN 5,946,666, USPN 6,003,018, USPN 6,101,484, USPN

6,360,210 B1, USPN 6,601,044 B1 and JP02001312593A are cited of interest.

    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sally Shih whose telephone number is 703-305-8550. The

examiner can normally be reached on Flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Vincent Millin can be reached on 703-308-1065. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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RICHARD WEISBERGER
PRIMARY EXAMINER